Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Cancelled)

2. (Previously Presented) A transmitting device, comprising:

a continuous pulse generating unit that continuously generates a plurality of impulse waveforms at arbitrary time intervals but shorter than a pulse string repetition cycle;

a modulating unit that modulates a continuous pulse generated by the continuous pulse generating unit, using transmission data; and

an output unit that outputs a pulse modulated by the modulating unit,

wherein a pulse interval of a plurality of impulse waveforms generated by the continuous pulse generating unit is set shorter than a pulse width of the plurality of impulse waveforms generated by the continuous pulse generating unit.

3. (Cancelled)

4. (Previously Presented) A transmitting device, comprising:

a continuous pulse generating unit that continuously generates a plurality of impulse waveforms at arbitrary time intervals but shorter than a pulse string repetition cycle;

a modulating unit that modulates a continuous pulse generated by the continuous pulse generating unit, using transmission data; and

an output unit that outputs a pulse modulated by the modulating unit,

said transmitting device, further comprising a frequency converting unit that converts a frequency of a pulse modulated by the modulating unit, wherein

a frequency to be converted by the frequency converting unit is arbitrarily selectable;

and

the output unit outputs a modulated pulse after being converted by the frequency converting unit.

5. (Previously Presented) A transmitting device, comprising:

a continuous pulse generating unit that continuously generates a plurality of impulse waveforms at arbitrary time intervals but shorter than a pulse string repetition cycle;

a modulating unit that modulates a continuous pulse generated by the continuous pulse generating unit, using transmission data; and

an output unit that outputs a pulse modulated by the modulating unit,

said transmitting device, further comprising a frequency converting unit that converts a frequency of a continuous pulse generated by the continuous pulse generating unit, wherein

a frequency to be converted by the frequency converting unit is arbitrarily selectable; and

the modulating unit modulates a continuous pulse after being converted by the frequency converting unit.

6. - 8. (Cancelled)

9. (Previously Presented) A receiving device comprising:

a modulated pulse receiving unit that receives a modulated pulse transmitted from a transmitting devices that outputs modulated pulses that are continuous pulses modulated using transmission data, the continuous pulses that are a plurality of impulse waveforms continuously generated at arbitrary time intervals but shorter than a pulse string repetition cycle; and

a demodulating unit that receives transmission data by demodulating a modulated pulse received by the modulated pulse receiving unit,

wherein the demodulating unit demodulates a signal that is a group of a plurality of continuous impulse waveforms pulse-phase modulated, and wherein the receiving device judges

a change in phase of a second pulse or later with reference to a first pulse.

10. (Previously Presented) A receiving device comprising:

a modulated pulse receiving unit that receives a modulated pulse transmitted from a transmitting devices that outputs modulated pulses that are continuous pulses modulated using transmission data, the continuous pulses that are a plurality of impulse waveforms continuously generated at arbitrary time intervals but shorter than a pulse string repetition cycle; and

a demodulating unit that receives transmission data by demodulating a modulated pulse received by the modulated pulse receiving unit,

wherein the demodulating unit demodulates a signal that is a group of a plurality of continuous impulse waveforms pulse-amplitude modulated, and wherein the receiving device judges a size of amplitudes of a second pulse or later with reference to a first pulse.

11. (Previously Presented) A receiving device comprising:

a modulated pulse receiving unit that receives a modulated pulse transmitted from a transmitting devices that outputs modulated pulses that are continuous pulses modulated using transmission data, the continuous pulses that are a plurality of impulse waveforms continuously generated at arbitrary time intervals but shorter than a pulse string repetition cycle; and

a demodulating unit that receives transmission data by demodulating a modulated pulse received by the modulated pulse receiving unit,

wherein the demodulating unit demodulates a signal that is a group of a plurality of continuous impulse waveforms pulse-position modulated, and wherein the receiving device judges a change in position of a second pulse or later with reference to a first pulse.

12. (Previously Presented) A transmitting device, comprising:

a continuous pulse generating unit that continuously generates a plurality of impulse waveforms at arbitrary time intervals but shorter than a pulse string repetition cycle;

a modulating unit that modulates a continuous pulse generated by the continuous pulse generating unit, using transmission data; and

an output unit that outputs a pulse modulated by the modulating unit,

said transmitting device further comprising a single pulse transmitting unit that generates a single pulse, pulse-position modulates the single pulse using the transmission data, and outputs the single pulse, wherein continuous pulses generated by the continuous pulse generating unit are a plurality of pulses with different phases continued, and wherein the modulating unit does not modulate the continuous pulses generated by the continuous pulse generating unit but inputs to the output unit.

13. (Original) The transmitting device as claimed in claim 12, wherein both a pulse-position modulated signal supplied from the single pulse transmitting unit and the continuous pulses are changed in position as appropriate for same arbitrary time.

14. (Previously Presented) A receiving device comprising:

a modulated pulse receiving unit that receives a modulated pulse transmitted from a transmitting devices that outputs modulated pulses that are continuous pulses modulated using transmission data, the continuous pulses that are a plurality of impulse waveforms continuously generated at arbitrary time intervals but shorter than a pulse string repetition cycle; and

a demodulating unit that receives transmission data by demodulating a modulated pulse received by the modulated pulse receiving unit,

wherein the continuous pulses are a plurality of pulses with different phases continued, and wherein the receiving device receives a signal transmitted from the transmitting device that outputs the continuous pulses without being modulated and outputs single pulses that have been pulse-position modulated using the transmission data, further comprising:

a two-signal receiving unit that receives a pulse-position modulated signal supplied from the single pulse transmitting unit and the continuous pulses; and

a correlation judgment unit that judges information by converting a correlation signal to signals with different phases, positive and negative, according to a pulse position, by multiplying the two signals received by the two-signal receiving unit.

15. - 16. (Cancelled)